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# Effect of olive oil on skin problems around a tracheostomy

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Received 25 February 2018; received in received from 13 March 2018; accepted 30 March 2018

#### Introduction

A hospital uses a band to fix the cannula to the tracheostomy. In many patients, skin problems such as pruritus and redness due to adhesion of the fixing bands appear. Many natural oils possess specific compounds with antimicrobial, antioxidant, anti-inflammatory, and anti-itch properties, making them attractive alternatives and complementary treatments for xerotic and inflammatory dermatoses associated with skin-barrier disruption. [1] We examined whether applying olive oil to patients wearing fixing bands would improve the skin moisturization and skin problems.

## Subjects and methods

The subjects were five patients experiencing skin problems while wearing tracheostomy fixation bands

All cannula fixing bands used were VBM neck tape®.

The following interventions were carried out.

- 1) A procedure manual was prepared to unify the method.
- 2) The nurse applied two to three drops of olive oil to the skin of the patient's neck at 11 o'clock every day. The application period was one month.
- 3) After five minutes, the nurse wiped away the oil with gauze wetted with water and squeezed hard.
- 4) The amount of skin moisture / oil content was measured with the skin checker at least once a week, before implementation, at 10 minutes after, and at 14:00 and 17:00. The site to be measured was the site that the tracheostomy fixing band on the side of the neck hits, and it is unified according to the patient.
- 5) Based on a checklist, each item was observed (visual evaluation of dryness,

presence or absence of redness, amount of moisture in the neck, amount of oil in the neck, reaction of the patient).

Evaluation

The moisture content, oil content, and degree of drying of the skin after the application of olive oil were compared. Patients who were able to communicate included their subjective opinion in the evaluation. The visual inspection evaluation was based "classification of dry skin symptoms of the elderly" 2) and 5 points out of 1 to 5 points are set in a good state in which no drying is observed at all. As a measure for the skin checker, we used the scale by Beauty Sign Plus.

Ethical consideration

We explained the purpose of the research to the target group and their families. I also explained about the following matters. 1) participation in research was voluntary, 2) information gathered in the research would not be used for research purposes, 3) participation could be canceled at any time, 4) suffer from disadvantage due to dropout There is no thing, 5) If any abnormality occurred, appropriate medical treatment would be given. After that, signed consent forms were received.

#### Results

In Patient 1, the skin of the neck was slightly dry before the intervention. After the intervention it had a standard degree of moisturization. In the visual examination evaluation, the score was four points before the intervention, but it improved to five points thereafter.

In Patient 2, the score was three points before the intervention in the visual examination evaluation, but it improved from four points to five points after the intervention. Redness, although intervention was observed, No.9 Fukuoka et al.

disappeared after intervention. There was itching before the intervention, but this improved after applying the olive oil.

Patient 3 had no significant change before and after the intervention. The visual examination evaluation improved somewhat. Redness disappeared after the intervention. There was strong itching, but this gradually improved after the intervention.

In Patient 4, the moisture content of the neck skin was good throughout the treatment.

In patient 5, the skin was slightly dry before the intervention, but after the intervention the moisture content became almost standard. The visual evaluation was improved. Redness disappeared after the intervention.

Overall, the moisture content in the neck gradually tended to improve from a dry to normal condition. There was a similar trend in the visual evaluation. Redness was seen in three people, but everyone improved.

### Discussion

Olive oil has a long history of use as a home remedy for skin maladies. The chief active components of olive oil include oleic acid, phenolic constituents, and squalene. The phenolics primary types of include hydroxytyrosol, tyrosol, and oleuropein, which naturally occur at high levels in virgin olive oil and have antioxidant activity. Hydroxytyrosol, tyrosol, and oleuropein have been demonstrated to exert antimicrobial effects against several strains of bacteria that are involved in intestinal and respiratory infections [2,3]. In addition, olive oil is a natural and safe lubricant. Many cosmetics also contain olive oil as a base [4].

Continued application of olive oil improved the moisture content and oil content of the neck and no new skin problems occurred. It was also possible to reduce the itching sensation. The olive oil was applied, then cleaned off five minutes later, but the measured values for water content and oil content was also not dry skin, and the state of the skin could be maintained or improved. The stickiness was also suppressed by wiping off, and there was no mention of discomfort. The effects were also observed in the area where the skin around the tracheostomy and the fixing band were in close contact.

#### References

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